

Motivation and Emotion

Psychology, Neuroscience & Behaviour 3M03: September - December, 2013

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Course Objectives This course covers the biological basis of motivation and emotion in humans and other mammals. The approach is strictly scientific, with an integration of evolutionary, physiological, developmental, and social perspectives. We will begin with fundamental biological dimensions of motivation and emotion common to all mammals, and will move progressively to more distinctively human and social issues.

General Policies Students are expected to attend regularly. Some information that is not available in readings will be given in lectures, and vice versa. Full lecture notes are not posted on-line, but skeletons of lectures are, so students may wish to print copies of these skeletons and enhance them with their own notes. Students are responsible for both lecture material and assigned readings, with roughly equal weighting.

Textbook and Readings

- 1) deCatanaro, D.A. (1999). *Motivation and Emotion: Evolutionary, Physiological, Developmental, and Social Perspectives*. Upper Saddle River, NJ: Prentice Hall (Pearson).
- 2) Additional required readings will be made available on the course website, including updates to a subset of the chapters of the textbook.

Evaluation

- 1) **Midterm Test #1** (25% of final grade): This will be held in the normal class hour on October 3rd. It covers chapters 1-5 and corresponding lectures and supplemental readings.
- 2) **Midterm Test #2** (30% of final grade): This will be held in the normal class hour on November 12th. It covers chapters 6-10 and corresponding lectures and supplemental readings.
- 3) **Assignments** (10% of final grade): The requirements for this assignment, worth 10% of the final grade, are described in a separate handout. You will prepare for this by reading in the primary scientific literature on a specific topic in motivation and emotion, as described in that handout. On November 22nd, you will answer a series of questions concerning these readings in class.
- 4) **Final Examination** (35% of the final grade): This will be scheduled by the Registrar's Office. It will cover the whole course, with some extra emphasis on material since midterm test #2.

Midterm tests and assignment questions can **only** be written at the times indicated, so plan to attend. There can normally be no make-up tests or special sessions for any student. If you are absent from the university for a minor medical reason, lasting fewer than 5 days, you may report your absence, once per term, without documentation, using the McMaster Student Absence Form (MSAF), for components worth less than 30% (*i.e.* in this course that could be the first test **or** the assignment completion). Absences for a longer duration or for other reasons must be reported to your Faculty/Program office, with documentation, and relief from term work may not necessarily be granted. When using the MSAF, report your absence to decatanz@mcmaster.ca. You then may be granted relief for the missing course evaluation component as described below. Please note that the MSAF may not be used for the final examination or components worth 30% or more. If the MSAF cannot be applied, you must consult the Dean of Studies office for your faculty (*e.g.* Science or Social Science). If absence from a midterm test is approved, grades for the other midterm test and final examination will be proportionally reweighted, increasing the relative contribution to comprise 90% of the final grade (the proportion exclusive of the assignments, *e.g.*, if test #1 is missed, the weighting will be: test #2, 41.538%; exam, 48.462%). If there is approved absence from the assignment completion session, the value of that component will be added to the final exam. The tests and examination will consist of questions in diverse formats, including true-false, multiple choice, short answer, and essay questions, at the instructor's discretion. Grades will be assigned according to the following convention: 90-100% = A+, 85-89% = A, 80-84% = A-, 77-79% = B+, 73-76% = B, 70-72% = B-, 67-69% = C+, 63-66% = C, 60-62% = C-, 57-59% = D+, 53-56% = D, 50-52% = D-, 0-49% = F. Appeal procedures for grading of the midterm tests are strictly structured and involve a written submission with a deadline approximately one week following the return of graded tests in class, as will be explained by the instructor.

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and the course website weekly during the term and to note any changes.

Attention is drawn to the Statement on Academic Ethics and the Senate Resolutions on Academic Dishonesty. Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, *e.g.* the grade of zero on a test or assignment, loss of credit with a notation on the transcript, and/or suspension or expulsion from the university. It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy (<http://www.mcmaster.ca/univsec/policy/AcademicIntegrity.pdf>).

Schedule of Lecture Topics, Readings, and Evaluation

- Sept. 5, 6: *Introduction and history*** Prescientific notions. Views from physiology, evolutionary biology, experimental psychology. Modern integration of scientific disciplines. *Chapter 1*
- Sept. 10, 12: *General evolutionary perspective*** Survival and reproduction. Natural selection and inclusive fitness maximization. Emotions and body language. *Chapter 2*
- Sept. 13, 17: *Genetics, learning, and development*** Perspectives on individual differences in motivation and emotion, from behavioural genetics, development, learning, and culture. *Chapter 3*
- Sept. 19 - 24: *General physiological perspective*** General structure of relevant nervous and endocrine systems. Autonomic nervous system, peripheral endocrine systems, hypothalamus and pituitary, limbic system, ventricular system, neurochemical systems. *Chapter 4*
- Sept. 26 - Oct. 1: *Basic appetitive systems*** Foraging, thirst, hunger, and feeding. Homeostasis and growth. Specific appetites and food aversions. *Chapter 5; Chapter 5 Update*
- Oct. 3: MIDTERM TEST #1**
- Oct. 4 - 10: *Pain and fear*** Adaptive value and expression of pain and fear, escape and avoidance. Thermoregulation. Physiological substrates. *Chapter 6*
- Oct. 11 - 17: *Reproduction*** Reproductive strategies, competition, neurohormonal substrates of various forms of reproductive behaviour. *Chapter 7*
- Oct. 18, 22: *Arousal, stress, and relaxation*** The general adaptation syndrome. Sympathetic and parasympathetic nervous systems. The pituitary-adrenal system. Adaptive and maladaptive consequences of chronic stress. *Chapter 8*
- Oct. 24 - 29: *Aggression*** Various forms of threat and aggression. Dominance and subordination. Anger and frustration. Sex and species differences. Neuroendocrine substrates. *Chapter 9*
- Nov. 5 - 8: *Happiness, sadness, depression, and helplessness*** Elation and depression from biological and developmental perspectives. Physiology of affective variation. Limitations to self-preservation, suicide, and parasuicide. *Chapter 10; Chapter 10 Update*
- Nov. 12: MIDTERM TEST #2**
- Nov. 14, 15: *Attachment and love*** Mother-child attachment. Familial love and peer bonding. Romantic attraction and pair-bonding. *Chapter 11*
- Nov. 19, 21: *Learning and achievement*** Reinforcers and punishers, acquired goals, imitation, incentives, cognitive mediation, need to achieve. *Chapter 12; Chapter 12 Update*
- Nov. 22: ASSIGNMENT COMPLETION**
- Nov. 26: *Conflicting motivation and emotion*** Concurrent emotions, hierarchies, conflict resolution. *Chapter 13*
- Nov. 28 – Dec. 3: *Social emotions*** Embarrassment, shame, guilt, and pride. *Chapter 14; Chapter 14 Update*
- FINAL EXAMINATION - Scheduled by the Registrar**